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EXAMINER

SEFCHECK, GREGORY B

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,516

Applicant(s)

TUOMI, JUKKA

Examiner

Gregory B Sefcheck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because, on line 9, it appears there is a typo – “do” should be “so”. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Doshi et al. (US006529499B1), hereafter Doshi.

- In regards to Claims 1 and 7,

Doshi discloses an admission control method and program for guaranteed quality of service of voice data within an IP network (Abstract; claim 1/7 – VoIP load management to assure voice quality in a packet network).

Doshi discloses tracking a number of calls in progress in the network (Col. 5, lines 6-10; claim 1/7 – determining a number of active VoIP calls).

Doshi further shows determining a maximum number of calls that can be supported in the network at guaranteed quality of service levels (Col. 3, lines 49-54; Col. 5, lines 3-6; claim 1/7 – determining a maximum number of calls the network can facilitate without loss of voice quality).

Referring to Fig. 5, Doshi shows a program where a new call request is admitted or rejected based on whether the new call would exceed the maximum capacity of the network (Col. 7-8, lines 35-32; claim 1/7 – allowing a new call when the addition would not exceed the maximum number of calls; claim 1/7 – blocking admission when the addition would exceed the max number of calls).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi in view of Kekki et al. (US006697364B1), hereafter Kekki.

- In regards to Claims 2 and 8,

Doshi discloses an admission control method and program for guaranteed quality of service of voice data in an IP network that covers all limitations of the parent claim.

Referring to Figs. 1-3, Doshi shows determining the bandwidth of a plurality of links between multiple gateways (Col. 4, lines 28-36; claim 2/8 – determining the bandwidth for a plurality of links between a plurality of gateway pools).

Doshi does not expressly show determining the number of TRAU frames per packet used to transmit data in the network and using that information to generate capacity information indicating the maximum number of calls permitted for network links.

Kekki shows that the number of TRAU frames used to encode voice data for transmission directly relates to the capacity of calls that the system can accommodate (Col. 1, lines 40-49; claim 2/8 – determining the number of TRAU frames per packet used to transmit data in the network; claim 2/8 – generating a capacity table indicating max number of calls permitted for the plurality of links based on the bandwidth of each link and the TRAU frames per packet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to determine system capacity for VoIP calls based on the number of TRAU frames per packet used to transmit voice data. TRAU encoding is a fundamental quantity affecting how system capacity is used to transmit voice data, therefore it would be beneficial to incorporate TRAU data when determining capacity information for a network.

- In regards to Claims 3 and 9,

Doshi v. Kekki discloses an admission control method and program for guaranteed quality of service of voice data within an IP network that covers all limitations of the parent claim.

Doshi shows that capacity information for the network links is maintained and used to determine whether to accept or reject a new call request (Col. 3, lines 45-54; Col. 4, lines 28-36; claim 3/9 – accessing the capacity table whenever a new call requests entry to the network).

- In regards to Claims 4 and 10,

Doshi v. Kekki discloses an admission control method and program for guaranteed quality of service of voice data within an IP network that covers all limitations of the parent claim.

Referring to Figs. 1-3, Doshi shows that the network comprises a plurality of gateways 215 that may connect multiple communication devices (claim 4/10 – network comprises a plurality of gateway pools having a plurality of comm. devices connected to a gateway computer).

- In regards to Claims 5, 6, 11, and 12,

Doshi v. Kekki discloses an admission control method and program for guaranteed quality of service of voice data within an IP network that covers all limitations of the parent claim.

Doshi shows that at least one of the plurality of gateways 215 has a signaling gateway 250 (Figs. 1-3; claim 5/11 – at least one of plurality of gateway pools has gateway keeper).

The signaling gateway 250 provide a higher layer protocol to facilitate signaling with IP devices and manage call access (Col. 3, lines 12-42; claim 6/12 – gateway keeper resolves IP addresses and manages access of calls to the network)

8. Claims 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheung in view of Thornton et al (US006363065B1), hereafter Thornton.

- In regards to Claims 13-20,

Cheung discloses a method and computer processor executable instructions for controlling the admission of a VoIP call into a packet network (Col. 2, lines 9-25; Col. 6, lines 35-48; Col. 10, lines 60-64; claim 13/17 – method and computer program for VoIP load management to assure voice quality in a packet network).

Cheung discloses determining a delay characteristic from a calling party to a called party for a new VoIP call (Col. 4, lines 5-63; claim 13/17 – determining a round trip time for the transmitting and echoing of the reply).

Cheung shows that the determined delay may be an average, median or weighted delay (Col. 4, lines 30-58; claim 14/18 – round trip time is an average of two round trips to and from the originating gateway and the destination gateway; claim 15/19 – round trip time is a second round trip time of two round trips to and from the originating gateway and the destination gateway).

Cheung discloses accepting the new call if the determined delay for the call satisfies the delay requirement of the network (Col. 10, lines 38-42; claim 13/17 – allowing access of a new call to the network when the round trip time is less than a predetermined value) or holding (blocking) the call if the determined delay for the call exceeds the network requirements (claim 16/20 – blocking the new call when the round trip time exceeds the predetermined value).

Cheung does not explicitly show transmitting a ping request to the originating gateway by a gatekeeper, transmitting a ping from the originating gateway to the destination gateway, and echoing a reply from the destination to the originating gateway to determine the round trip delay, as specified in claims 13 and 17.

Thornton discloses an apparatus and methods for VoIP telephony gateways. Thornton shows call admission control by the gateways of the network may reference the latency of the network, measured by regularly sending a ping between peer gateways associated with a VoIP call (Col. 26, lines 10-14), when determining whether to accept or reject a new call (Col. 15-16; lines 55-10; Col. 30, lines 32+; claim 13/17 –

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transmitting a ping request to an originating gateway by a gatekeeper; claim 13/17 – transmitting a ping IP address to a destination gateway by the originating gateway; claim 13/17 – echoing a reply to the originating gateway by the destination gateway).

It would have been obvious to one of ordinary skill in the art at the time of the invention to determine the delay characteristics shown in the method and computer program of Cheung by utilizing a ping between the gateways associated with a particular call for measuring round-trip delay, as shown by Thornton. Utilizing a ping between gateways for measuring delay is a well-known, reliable way to measure delay in a packet network, thereby ensuring voice over IP data is delivered within acceptable time constraints.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Garg et al. (US 20040008627A1) discloses a method and apparatus for performing admission control in a communication network
- Gokulrangan (US006658512B1) discloses an admission control method for data communications over peripheral buses

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- Oltedal et al. (US006611694B1) discloses an arrangement for improving the speech quality, especially for VoIP calls
- Shaffer et al. (US006377573B1) discloses a method and apparatus for providing a minimum acceptable quality of service for a voice conversation over a data network
- Gossett Dalton, Jr. et al. (US006426955B1) discloses an internet telephony call routing engine
- Marin et al. (US006222824B1) discloses statistical call admission control
- Phaal (US006006269A) discloses an admission control system with messages admitted or deferred for re-submission at a later time on a priority basis
- Peris et al. (US005796419A) discloses traffic flow regulation to guarantee end-to-end delay in packet switched networks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B Sefcheck whose telephone number is 703-305-0633. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS
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